



Review article

Tourette's syndrome, trichotillomania, and obsessive–compulsive disorder: How closely are they related?

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ABSTRACT

The question of whether Tourette's syndrome (TS) and trichotillomania (TTM) are best conceptualized as obsessive–compulsive spectrum disorders was raised by family studies demonstrating a close relationship between TS and obsessive–compulsive disorder (OCD), and by psychopharmacological research indicating that both TTM and OCD respond more robustly to clomipramine than to desipramine. A range of studies have subsequently allowed comparison of the phenomenology, psychobiology, and management of TS and TTM, with that of OCD. Here we briefly review this literature. The data indicate that there is significant psychobiological overlap between TS and OCD, supporting the idea that TS can be conceptualized as an OCD spectrum disorder. TTM and OCD have only partial overlap in their phenomenology and psychobiology, but there are a number of reasons for why it may be useful to classify TTM and other habit disorders as part of the obsessive–compulsive spectrum of disorders.

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1. Introduction

The question of whether Tourette's syndrome (TS) and trichotillomania (TTM) are best conceptualized as obsessive–compulsive spectrum disorders has been raised by family studies on the close relationship between TS and obsessive–compulsive disorder (OCD) (Pauls et al., 1986; Rosario-Campos et al., 2005), and by psychopharmacological research indicating that both TTM and OCD respond more robustly to clomipramine than to desipramine (Zohar and Insel, 1987; Swedo et al., 1989). A range of studies have subsequently allowed comparison of the phenomenology, psychobiology, and management of TS and TTM, with that of OCD. These disorders are characterized by repetitive behaviors and may have a number of phenomenological intersections as depicted in Fig. 1 (Lochner et al., 2005; Chamberlain et al., 2006; Ferrão et al., 2006). Thus, some kinds of hair-pulling resemble tic-like behaviors or compulsions insofar as they are preceded by an urge to pull and followed by a sense of relief (Fig. 1, area A) or are preceded by obsessive thoughts (Fig. 1, area B); tics and compulsions can overlap insofar as some compulsions are preceded by sensory phenomena and some tics are in response to obsessions (Fig. 1, area B); and some patients have hair-pulling, tics, and compulsions (Fig. 1, area D).

Here we briefly review the current literature on the relationship of these disorders with OCD, beginning with Tourette's syndrome, and moving on to trichotillomania.

2. Tourette's syndrome and OCD

2.1. Phenomenology

The main phenomenological differences between TS and OCD are presented in Table 1. In OCD, compulsions are typically performed in

response to obsessive thoughts, images, or impulses. In contrast, in TS tics are not commonly preceded by obsessions. In addition, tics are sometimes performed involuntarily, whereas compulsions are always performed intentionally. Tics that are performed voluntarily and compulsions not preceded by obsessions represent an area of overlap between OCD and TS.

2.1.1. Repetitive behaviors instead of compulsions or tics

The Tourette's Syndrome Classification Study Group (1993) describes tics as an “involuntary” (i.e., completely unintentional) response to either an urge or an unpleasant sensation (i.e., sensory phenomena), perceived as “voluntary”. Nevertheless, as indicated above, there are areas of overlap between complex motor tics and compulsions. For instance, repetitive behaviors such as touching or eye blinking may result from a need to relieve an urge or an unpleasant sensation, or to neutralize a superstitious fear. Thus, depending on the nature of the subjective experience, the same repetitive behavior is labeled differently in our current nosology (Miguel et al., 1995).

The term “intentional repetitive behavior” may have the advantage of encompassing various presentations of stereotyped repetitive behaviors reported in TS and OCD patients (as well as a number of other disorders, such as trichotillomania and stereotypic movement disorder), while at the same time allowing a clear differentiation from unintentional or involuntary tic phenomena (e.g., simple tics) (Miguel et al., 1995). The intentional repetitive behaviors of both TS and OCD can be conceptualized as responses to unpleasant internal cues.

2.1.2. OCD with tics

On a theoretical continuum of tics and compulsions, it can be hypothesized that a nodal point exists where the shift from “unintentional” to “intentional” repetitive behaviors takes place. Subjective experiences that precede these behaviors may be helpful in defining this

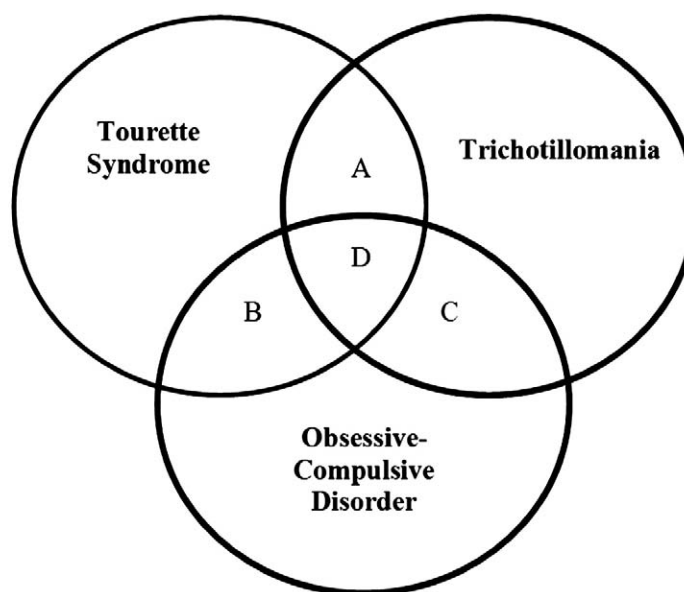


Fig. 1. Obsessive–compulsive disorder, Tourette syndrome and trichotillomania. Legend: A—automatic trichotillomania; B—tic-like compulsion, complex tic (“compulsion-like” tic) and sensory phenomena; C—focused trichotillomania or hair focused obsessions or compulsions (“grooming-like” obsessive–compulsive symptoms) and sensory phenomena; D—complex repetitive behavior disorder.

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